

CLAIMS

1. Data-transceiving equipment comprising:

a received data-separating unit operable to separate received data into two different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

5 a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

10 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

an image input unit operable to enter image data;

15 an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from said image input unit;

20 an image-displaying unit operable to display a blended image based on the blended image data from said image-blending unit;

an encoding unit operable to individually encode the image data from said image input unit, the decoded data from said decoding unit, and the graphics image data from said graphics-generating unit; and

25 a storing unit operable to store the encoded image data, the encoded decoded data, and the encoded graphics image data.

2. Data-transceiving equipment comprising:

a received data-separating unit operable to separate received data into two

different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

5 a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

10 an image input unit operable to enter image data;

 an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from 15 said image input unit;

 an image-displaying unit operable to display a blended image based on the blended image data from said image-blending unit;

20 an encoding unit operable to individually encode the image data from said image input unit and the decoded data from said decoding unit, thereby providing encoded data;

 a multiplexing unit operable to multiplex the encoded data from said encoding unit with the graphics data from said received data-separating unit, thereby providing multiplexed data;

25 a storing unit operable to store the multiplexed data from said multiplexing unit; and

 a stored data-separating unit operable to separate the multiplexed data from said storing unit into two different pieces of the encoded data and the graphics data,

thereby providing the encoded data and the graphics data separately.

3. Data-transceiving equipment as defined in claim 2, further comprising:
a control unit,

5 wherein, as to a graphics image, a first mode allows said storing unit to store
the graphics data that underlies the graphics image,

wherein, as to the graphics image, a second mode allows said storing unit to
store the encoded graphics image data from said encoding unit, and

wherein a switchover between the first and second modes is realized in
accordance with instructions from said control unit.

10 4. Data-transceiving equipment comprising:

a received data-separating unit operable to separate received data into two
different pieces of encoded data and graphics data, thereby providing the encoded data
and the graphics data, when the received data includes the encoded data and the
graphics data, said received data-separating unit being operable to provide the encoded
data when the received data includes the encoded data, but not the graphics data;

15 a decoding unit operable to decode the encoded data from said received
data-separating unit, thereby providing decoded data;

20 a graphics-generating unit operable to generate graphics image data based on
the graphics data from said received data-separating unit, thereby providing the graphics
image data;

an image input unit operable to enter image data;

25 an image-blending unit operable to blend a plurality of images with one
another to provide blended image data, the plurality of images being represented by at
least two pieces of data selected from among the decoded data from said decoding unit,
the graphics image data from said graphics-generating unit, and the image data from
said image input unit;

an image-displaying unit operable to display a blended image based on the

blended image data from said image-blending unit;

a selecting unit operable to select, in response to a control signal, data from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from said image input unit, thereby providing selected data;

an encoding unit operable to encode the selected data from said selecting unit, thereby providing encoded data; and

a storing unit operable to store the encoded data from said encoding unit, wherein said encoding unit individually encodes two or greater pieces of data selected by said selecting unit when said selecting unit selects the two or greater pieces of data.

5. Data-transceiving equipment comprising:

a received data-separating unit operable to separate received data into two different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

20 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

an image input unit operable to enter image data;

25 an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from

said image input unit;

an image-displaying unit operable to display a blended image based on the blended image data from said image-blending unit;

5 a selecting unit operable to select, in response to a control signal, data from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from said image input unit, thereby providing selected data;

an encoding unit operable to encode the selected data from said selecting unit, thereby providing encoded data;

10 a multiplexing unit operable to multiplex the graphics data with the encoded data from said encoding unit upon receipt of the graphics data from said received data-separating unit, thereby providing multiplexed data;

15 a storing unit operable to store the multiplexed data upon receipt of the multiplexed data from said multiplexing unit, but operable to store the encoded data upon receipt of the encoded data from said encoding unit; and

a stored data-separating unit operable to separate the multiplexed data from said storing unit into two different pieces of the encoded data and the graphics data, thereby providing the encoded data and the graphics data separately,

wherein said encoding unit individually encodes two or greater pieces of data 20 selected by said selecting unit when said selecting unit selects the two or greater pieces of data.

6. Data-transceiving equipment as defined in claim 5, further comprising:

a control unit,

wherein, as to a graphics image, a first mode allows said storing unit to store 25 the encoded graphics image data from said encoding unit,

wherein, as to the graphics image, a second mode allows said storing unit to store the graphics data that underlies the graphics image, and

wherein a switchover between the first and second modes is realized in accordance with instructions from the said control unit.

7. Data-transceiving equipment as defined in claim 6, wherein the second mode allows or disallows said receiving data-separating unit to enter the graphics data into said multiplexing unit in response to instructions from said control unit.

8. Data-transceiving equipment as defined in claim 5, further comprising:
a control unit,

wherein said storing unit stores image data specified by said control unit from among the image data from said image input unit, the decoded data from said decoding unit, and graphics-related data, and

wherein said storing unit stores data specified by said control unit from between the graphics image data from said graphics-generating unit and the graphics data from said received data-separating unit when said storing unit stores the graphics-related data.

15 9. Data-transceiving equipment as defined in claim 1, wherein said storing unit stores data related to the blended image displayed on said image-displaying unit.

10. An image processor comprising:

a received data-separating unit operable to separate received data into two different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

25 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and image data from outside 5 of said image processor;

an encoding unit operable to individually encode the image data from the outside of said image processor, the decoded data from said decoding unit, and the graphics image data from said graphics-generating unit; and

10 a storing unit operable to store the encoded image data from the outside of said image processor, the encoded decoded data, and the encoded graphics image data.

11. An image processor comprising:

15 a received data-separating unit operable to separate received data into two different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

20 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

25 an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and image data from outside of said image processor;

an encoding unit operable to individually encode the image data from the

outside of said image processor and the decoded data from said decoding unit, thereby providing encoded data;

5 a multiplexing unit operable to multiplex the encoded data from said encoding unit with the graphics data from said received data-separating unit, thereby providing multiplexed data;

a storing unit operable to store the multiplexed data from said multiplexing unit; and

10 a stored data-separating unit operable to separate the multiplexed data from said storing unit into two different pieces of the encoded data and the graphics data, thereby providing the encoded data and the graphics data separately.

12. An image processor comprising:

15 a received data-separating unit operable to separate received data into two different pieces of encoded data and graphics data, thereby providing the encoded data and the graphics data, when the received data includes the encoded data and the graphics data, said received data-separating unit being operable to provide the encoded data when the received data includes the encoded data, but not the graphics data;

a decoding unit operable to decode the encoded data from said received data-separating unit, thereby providing decoded data;

20 a graphics-generating unit operable to generate graphics image data based on the graphics data from said received data-separating unit, thereby providing the graphics image data;

25 an image-blending unit operable to blend a plurality of images with one another to provide blended image data, the plurality of images being represented by at least two pieces of data selected from among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and image data from outside of said image processor;

a selecting unit operable to select, in response to a control signal, data from

among the decoded data from said decoding unit, the graphics image data from said graphics-generating unit, and the image data from the outside of said image processor, thereby providing selected data;

an encoding unit operable to encode the selected data from said selecting unit,
5 thereby providing encoded data; and

a storing unit operable to store the encoded data from said encoding unit,
wherein said encoding unit individually encodes two or greater pieces of data
selected by said selecting unit when said selecting unit selects the two or greater pieces
of data.

10 13. An image processor:

a received data-separating unit operable to separate received data into two
different pieces of encoded data and graphics data, thereby providing the encoded data
and the graphics data, when the received data includes the encoded data and the
graphics data, said received data-separating unit being operable to provide the encoded
15 data when the received data includes the encoded data, but not the graphics data;

a decoding unit operable to decode the encoded data from said received
data-separating unit, thereby providing decoded data;

a graphics-generating unit operable to generate graphics image data based on
the graphics data from said received data-separating unit, thereby providing the graphics
20 image data;

an image-blending unit operable to blend a plurality of images with one
another to provide blended image data, the plurality of images being represented by at
least two pieces of data selected from among the decoded data from said decoding unit,
the graphics image data from said graphics-generating unit, and image data from outside
25 of said image processor;

a selecting unit operable to select, in response to a control signal, data from
among the decoded data from said decoding unit, the graphics image data from said

graphics-generating unit, and the image data from the outside of said image processor, thereby providing selected data;

an encoding unit operable to encode the selected data from said selecting unit, thereby providing encoded data;

5 a multiplexing unit operable to multiplex the graphics data with the encoded data from said encoding unit upon receipt of the graphics data from said received data-separating unit, thereby providing multiplexed data;

a storing unit operable to store the multiplexed data upon receipt of the multiplexed data from said multiplexing unit, but operable to store the encoded data

10 upon receipt of the encoded data from said encoding unit; and

a stored data-separating unit operable to separate the multiplexed data from said storing unit into two different pieces of the encoded data and the graphics data, thereby providing the encoded data and the graphics data separately,

wherein said encoding unit individually encodes two or greater pieces of data selected by said selecting unit when said selecting unit selects the two or greater pieces of data.

14. An image processor comprising:

a decoding unit operable to decode entered encoded data, thereby producing decoded data;

20 an encoding unit operable to individually encode entered image data and the decoded data; and

a storing unit operable to store the individually encoded image data and the individually encoded decoded data.

15. An image-processing method comprising:

25 decoding entered encoded data, thereby producing decoded data;

individually encoding entered image data and the decoded data; and

storing the individually encoded image data and the individually encoded

decoded data.